

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/553,431B
Source: JFWT61
Date Processed by STIC: ESOS

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IFW16

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/553,431B

DATE: 01/05/2005
TIME: 15:03:50

Input Set : A:\Un900411.app
Output Set: N:\CRF4\01052005\I553431B.raw

3 <110> APPLICANT: Osteryoung, Katherine W.
5 <120> TITLE OF INVENTION: Manipulation of Min Genes in Plants
7 <130> FILE REFERENCE: 920905.90041
C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/553,431B
C--> 10 <141> CURRENT FILING DATE: 2000-04-19
12 <150> PRIOR APPLICATION NUMBER: 60/130,403
13 <151> PRIOR FILING DATE: 1999-04-19
15 <160> NUMBER OF SEQ ID NOS: 12
17 <170> SOFTWARE: PatentIn Ver. 2.1
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 978
21 <212> TYPE: DNA
22 <213> ORGANISM: *Prototheca wickerhamii*
24 <220> FEATURE:
25 <221> NAME/KEY: CDS
26 <222> LOCATION: (1)..(978)
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30 Met Ala Ser Leu Arg Leu Phe Ser Thr Asn His Gln Ser Leu Leu Leu
31 1 5 10 15
33 cca tca tct ctc tca caa aag act cta ata tct tca cca aga ttc gtc 96
34 Pro Ser Ser Leu Ser Gln Lys Thr Leu Ile Ser Ser Pro Arg Phe Val
35 20 25 30
37 aat aac cct agc aga cgg agt cca ata cga tcc gtt ctt caa ttt aat 144
38 Asn Asn Pro Ser Arg Arg Ser Pro Ile Arg Ser Val Leu Gln Phe Asn
39 35 40 45
41 cgc aaa ccg gaa ctc gcc gga aac acg ccc cgt atc gtc gtt atc acc 192
42 Arg Lys Pro Glu Leu Ala Gly Glu Thr Pro Arg Ile Val Val Ile Thr
43 50 55 60
45 tcc gga aaa ggc ggt gtt gga aag acg aca acc acc gca aat gtc ggt 240
46 Ser Gly Lys Gly Val Gly Lys Thr Thr Thr Ala Asn Val Gly
47 65 70 75 80
49 ctc tct ctc gct cgt tac ggt ttc tca gtt gtc gcc att gac gcc gac 288
50 Leu Ser Leu Ala Arg Tyr Gly Phe Ser Val Val Ala Ile Asp Ala Asp
51 85 90 95
53 ctt ggt ctc cgt aac ctc gat ctc ctc cta ggg tta gag aat cga gtc 336
54 Leu Gly Leu Arg Asn Leu Asp Leu Leu Gly Leu Glu Asn Arg Val
55 100 105 110
57 aat tac act tgc gtc gag gtt ata aac gga gat tgt cgt ctc gat caa 384
58 Asn Tyr Thr Cys Val Glu Val Ile Asn Gly Asp Cys Arg Leu Asp Gln
59 115 120 125
61 gct ctg gta cgt gat aag cgt tgg tcg aat ttc gaa ttg cta tgt ata 432
62 Ala Leu Val Arg Asp Lys Arg Trp Ser Asn Phe Glu Leu Leu Cys Ile

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65	tct	aaa	cct	aga	tcg	aaa	ctt	ccg	atg	gga	ttt	ggt	ggt	aaa	gca	ttg	480
66	Ser	Lys	Pro	Arg	Ser	Lys	Leu	Pro	Met	Gly	Phe	Gly	Gly	Lys	Ala	Leu	
67	145					150					155				160		
69	gaa	tgg	ctt	gtg	gat	gcg	ttg	aaa	act	aga	ccg	gaa	ggt	tca	ccg	gat	528
70	Glu	Trp	Leu	Val	Asp	Ala	Leu	Lys	Thr	Arg	Pro	Glu	Gly	Ser	Pro	Asp	
71						165				170				175			
73	ttc	atc	atc	atc	gat	tgt	cct	gca	gga	atc	gat	gcc	gga	ttc	ata	acc	576
74	Phe	Ile	Ile	Ile	Asp	Cys	Pro	Ala	Gly	Ile	Asp	Ala	Gly	Phe	Ile	Thr	
75						180				185				190			
77	gcc	att	act	ccg	gcg	aat	gaa	gca	gtt	ctg	gta	aca	act	ccg	gat	ata	624
78	Ala	Ile	Thr	Pro	Ala	Asn	Glu	Ala	Val	Leu	Val	Thr	Thr	Pro	Asp	Ile	
79						195			200				205				
81	aca	gcg	tta	agg	gat	gct	gat	agg	gtt	acg	ggt	ttg	tta	gaa	tgc	gat	672
82	Thr	Ala	Leu	Arg	Asp	Ala	Asp	Arg	Val	Thr	Gly	Leu	Leu	Glu	Cys	Asp	
83						210			215			220					
85	gga	atc	aga	gat	ata	aag	atg	att	gtg	aac	aga	gtg	aga	act	gat	atg	720
86	Gly	Ile	Arg	Asp	Ile	Lys	Met	Ile	Val	Asn	Arg	Val	Arg	Thr	Asp	Met	
87						225			230			235			240		
89	att	aaa	gga	gag	gat	atg	atg	tca	gtg	tta	gat	gtg	cag	gag	atg	ttg	768
90	Ile	Lys	Gly	Glu	Asp	Met	Met	Ser	Val	Leu	Asp	Val	Gln	Glu	Met	Leu	
91						245			250			255					
93	gga	ttg	tca	ttg	ctt	ggt	gta	att	cct	gaa	gat	tct	gag	gtt	att	cga	816
94	Gly	Leu	Ser	Leu	Leu	Gly	Val	Ile	Pro	Glu	Asp	Ser	Glu	Val	Ile	Arg	
95						260			265			270					
97	agc	acg	aat	cga	ggg	ttt	ccg	ctt	gtt	ctg	aat	aag	cct	cct	acg	ctt	864
98	Ser	Thr	Asn	Arg	Gly	Phe	Pro	Leu	Val	Leu	Asn	Lys	Pro	Pro	Thr	Leu	
99						275			280			285					
101	gcg	gga	ttg	gcg	ttt	gag	cag	gcg	gct	tgg	aga	ctc	gtt	gag	caa	gat	912
102	Ala	Gly	Leu	Ala	Phe	Glu	Gln	Ala	Ala	Trp	Arg	Leu	Val	Glu	Gln	Asp	
103						290			295			300					
105	agt	atg	aag	gct	gtt	atg	gtg	gag	gaa	gaa	cct	aag	aaa	cgt	ggc	ttc	960
106	Ser	Met	Lys	Ala	Val	Met	Val	Glu	Glu	Glu	Pro	Lys	Lys	Arg	Gly	Phe	
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124						20			25			30					
126	Asn	Asn	Pro	Ser	Arg	Arg	Ser	Pro	Ile	Arg	Ser	Val	Leu	Gln	Phe	Asn	
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129	Arg	Lys	Pro	Glu	Leu	Ala	Gly	Glu	Thr	Pro	Arg	Ile	Val	Val	Ile	Thr	

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Input Set : A:\Un900411.app
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130 50 55 60
 132 Ser Gly Lys Gly Gly Val Gly Lys Thr Thr Thr Ala Asn Val Gly
 133 65 70 75 80
 135 Leu Ser Leu Ala Arg Tyr Gly Phe Ser Val Val Ala Ile Asp Ala Asp
 136 85 90 95
 138 Leu Gly Leu Arg Asn Leu Asp Leu Leu Gly Leu Glu Asn Arg Val
 139 100 105 110
 141 Asn Tyr Thr Cys Val Glu Val Ile Asn Gly Asp Cys Arg Leu Asp Gln
 142 115 120 125
 144 Ala Leu Val Arg Asp Lys Arg Trp Ser Asn Phe Glu Leu Leu Cys Ile
 145 130 135 140
 147 Ser Lys Pro Arg Ser Lys Leu Pro Met Gly Phe Gly Gly Lys Ala Leu
 148 145 150 155 160
 150 Glu Trp Leu Val Asp Ala Leu Lys Thr Arg Pro Glu Gly Ser Pro Asp
 151 165 170 175
 153 Phe Ile Ile Ile Asp Cys Pro Ala Gly Ile Asp Ala Gly Phe Ile Thr
 154 180 185 190
 156 Ala Ile Thr Pro Ala Asn Glu Ala Val Leu Val Thr Thr Pro Asp Ile
 157 195 200 205
 159 Thr Ala Leu Arg Asp Ala Asp Arg Val Thr Gly Leu Leu Glu Cys Asp
 160 210 215 220
 162 Gly Ile Arg Asp Ile Lys Met Ile Val Asn Arg Val Arg Thr Asp Met
 163 225 230 235 240
 165 Ile Lys Gly Glu Asp Met Met Ser Val Leu Asp Val Gln Glu Met Leu
 166 245 250 255
 168 Gly Leu Ser Leu Leu Gly Val Ile Pro Glu Asp Ser Glu Val Ile Arg
 169 260 265 270
 171 Ser Thr Asn Arg Gly Phe Pro Leu Val Leu Asn Lys Pro Pro Thr Leu
 172 275 280 285
 174 Ala Gly Leu Ala Phe Glu Gln Ala Ala Trp Arg Leu Val Glu Gln Asp
 175 290 295 300
 177 Ser Met Lys Ala Val Met Val Glu Glu Glu Pro Lys Lys Arg Gly Phe
 178 305 310 315 320
 180 Phe Ser Phe Phe Gly Gly
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 186 <211> LENGTH: 1182
 187 <212> TYPE: DNA
 188 <213> ORGANISM: Tagetes erecta
 190 <220> FEATURE:
 191 <221> NAME/KEY: CDS
 192 <222> LOCATION: (50)..(934)
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 196 Met Thr Ser
 197 1
 199 ctg agg ttt cta aca gaa ccc tca ctt gta tgc tca tcc act ttc ccc 106
 200 Leu Arg Phe Leu Thr Glu Pro Ser Leu Val Cys Ser Ser Thr Phe Pro
 201 5 10 15

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204 Thr Phe Asn Pro Leu His Lys Thr Leu Thr Lys Pro Thr Pro Lys Pro	
205 20 25 30 35	
207 tac cca aag cca cca cca att cgc tcc gtc ctt caa tac aat cgc aaa	202
208 Tyr Pro Lys Pro Pro Ile Arg Ser Val Leu Gln Tyr Asn Arg Lys	
209 40 45 50	
211 cca gag ctc gcc gga gac act cca cga gtc gtc gca atc gac gcc gac	250
212 Pro Glu Leu Ala Gly Asp Thr Pro Arg Val Val Ala Ile Asp Ala Asp	
213 55 60 65	
215 gtt ggt cta cgt aac ctc gat ctt ctt ctc ggt ctc gaa aac cgc gtc	298
216 Val Gly Leu Arg Asn Leu Asp Leu Leu Gly Leu Glu Asn Arg Val	
217 70 75 80	
219 aat tac acc gtc gtt gaa gtt ctc aac ggc gat tgc aga ctc gac caa	346
220 Asn Tyr Thr Val Val Glu Val Leu Asn Gly Asp Cys Arg Leu Asp Gln	
221 85 90 95	
223 gcc cta gtt cgt gat aaa cgc tgg tca aat ttc gaa ttg ctt tgt att	394
224 Ala Leu Val Arg Asp Lys Arg Trp Ser Asn Phe Glu Leu Leu Cys Ile	
225 100 105 110 115	
227 tca aaa cct agg tca aaa ttg cct tta gga ttt ggg gga aaa gct tta	442
228 Ser Lys Pro Arg Ser Lys Leu Pro Leu Gly Phe Gly Gly Lys Ala Leu	
229 120 125 130	
231 gtt tgg ctt gat gca tta aaa gat agg caa gaa ggt tgc ccg gat ttt	490
232 Val Trp Leu Asp Ala Leu Lys Asp Arg Gln Glu Gly Cys Pro Asp Phe	
233 135 140 145	
235 ata ctt ata gat tgt cct gca ggt att gat gcc ggg ttc ata acc gcc	538
236 Ile Leu Ile Asp Cys Pro Ala Gly Ile Asp Ala Gly Phe Ile Thr Ala	
237 150 155 160	
239 att aca ccg gct aac gaa gcc gta tta gtt aca aca cct gat att act	586
240 Ile Thr Pro Ala Asn Glu Ala Val Leu Val Thr Thr Pro Asp Ile Thr	
241 165 170 175	
243 gca ttg aga gat gca gat aga gtt aca ggc ttg ctt gaa tgt gat gga	634
244 Ala Leu Arg Asp Ala Asp Arg Val Thr Gly Leu Leu Glu Cys Asp Gly	
245 180 185 190 195	
247 att agg gat att aaa atg att gtg aac aga gtt aga act gat ttg ata	682
248 Ile Arg Asp Ile Lys Met Ile Val Asn Arg Val Arg Thr Asp Leu Ile	
249 200 205 210	
251 agg ggt gaa gat atg atg tca gtt ctt gat gtt caa gag atg ttg gga	730
252 Arg Gly Glu Asp Met Met Ser Val Leu Asp Val Gln Glu Met Leu Gly	
253 215 220 225	
255 ttg tca ttg ttg agt gat acc cga gga ttc gaa gtg att cgg agt acg	778
256 Leu Ser Leu Leu Ser Asp Thr Arg Gly Phe Glu Val Ile Arg Ser Thr	
257 230 235 240	
259 aat aga ggg ttt ccg ctt gtg ttg aac aag cct ccg act tta gca gga	826
260 Asn Arg Gly Phe Pro Leu Val Leu Asn Lys Pro Pro Thr Leu Ala Gly	
261 245 250 255	
263 ttg gca ttt gag cag gct gct tgg aga ttg gtt gag caa gat agc atg	874
264 Leu Ala Phe Glu Gln Ala Ala Trp Arg Leu Val Glu Gln Asp Ser Met	
265 260 265 270 275	
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Input Set : A:\Un900411.app
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268 Lys Ala Val Met Val Glu Glu Glu Pro Lys Lys Arg Gly Phe Phe Ser
269 280 285 290
271 ttt ttt gga ggt tagtgatcga attcggtgaa tcggttagtt gggtttggttt 974
272 Phe Phe Gly Gly
273 295
275 tggggagaa atgtgtcttg tttgttcatg taggagctgc tatgtgtcac ttgaaatgtt 1034
277 atgtgtacag taagctgata aggattgtt taattcagtt ttcagagaga aaattagaat 1094
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285 <211> LENGTH: 295
286 <212> TYPE: PRT
287 <213> ORGANISM: Tagetes erecta
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296 Pro Lys Pro Tyr Pro Lys Pro Pro Pro Ile Arg Ser Val Leu Gln Tyr
297 35 40 45
299 Asn Arg Lys Pro Glu Leu Ala Gly Asp Thr Pro Arg Val Val Ala Ile
300 50 55 60
302 Asp Ala Asp Val Gly Leu Arg Asn Leu Asp Leu Leu Gly Leu Glu
303 65 70 75 80
305 Asn Arg Val Asn Tyr Thr Val Val Glu Val Leu Asn Gly Asp Cys Arg
306 85 90 95
308 Leu Asp Gln Ala Leu Val Arg Asp Lys Arg Trp Ser Asn Phe Glu Leu
309 100 105 110
311 Leu Cys Ile Ser Lys Pro Arg Ser Lys Leu Pro Leu Gly Phe Gly Gly
312 115 120 125
314 Lys Ala Leu Val Trp Leu Asp Ala Leu Lys Asp Arg Gln Glu Gly Cys
315 130 135 140
317 Pro Asp Phe Ile Leu Ile Asp Cys Pro Ala Gly Ile Asp Ala Gly Phe
318 145 150 155 160
320 Ile Thr Ala Ile Thr Pro Ala Asn Glu Ala Val Leu Val Thr Thr Pro
321 165 170 175
323 Asp Ile Thr Ala Leu Arg Asp Ala Asp Arg Val Thr Gly Leu Leu Glu
324 180 185 190
326 Cys Asp Gly Ile Arg Asp Ile Lys Met Ile Val Asn Arg Val Arg Thr
327 195 200 205
329 Asp Leu Ile Arg Gly Glu Asp Met Met Ser Val Leu Asp Val Gln Glu
330 210 215 220
332 Met Leu Gly Leu Ser Leu Leu Ser Asp Thr Arg Gly Phe Glu Val Ile
333 225 230 235 240
335 Arg Ser Thr Asn Arg Gly Phe Pro Leu Val Leu Asn Lys Pro Pro Thr
336 245 250 255
338 Leu Ala Gly Leu Ala Phe Glu Gln Ala Ala Trp Arg Leu Val Glu Gln
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341 Asp Ser Met Lys Ala Val Met Val Glu Glu Pro Lys Lys Arg Gly

VERIFICATION SUMMARY

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L:9 M:270 C: Current Application Number differs, Replaced Application Number

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date